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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/550,878	09/27/2005	Guido Theodorus Volleberg	NL 030302	1689

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EXAMINER

YAARY, MICHAEL D

ART UNIT	PAPER NUMBER
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2193

MAIL DATE	DELIVERY MODE
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09/29/2009

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/550,878	Applicant(s) VOLLEBERG ET AL.	
	Examiner MICHAEL YAARY	Art Unit 2193	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 September 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-9, 11 and 12 is/are rejected.
- 7) ☒ Claim(s) 10 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 27 September 2005 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>02/06/2007</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. Claims 1-12 are pending in the application.

Drawings

2. Figures 1 and 2 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

3. The drawings are objected to because figure 15 is unable to read or understood due to the lack of clarity in the drawing. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must

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be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1-9 and 11-12 are rejected under 35 U.S.C. 102(b) as being anticipated by Van Dalfsen et al. (hereafter Van Dalfsen)(US Pat. 5,892,695).

Van Dalfsen was cited in the IDS filed 02/06/2007.

6. **As to claim 1**, Van Dalfsen discloses a Finite Impulse Response filter device for sample rate converting a sequence of discrete representations (column 1, lines 44-59); the filter device including:

An input pipeline IP for receiving the sequence of discrete representations (pipeline from D0-D5 of figure 3) and including:

A sequence of input delay cells, each for storing a discrete representation (fig. 3 D0-D5); and

A plurality of N input tap points, where an input tap point is provided at least between each sequential pair of input delay cells (taps between D0-D1, D1-D2, D2-D3...etc.);

An output pipeline for supplying a sequence of discrete representations (fig. 3 pipeline D'5-D'0) and including:

A sequence of output delay cells, each for storing a discrete representation (fig. 3 D'5-D'0);

A plurality of N summing elements for adding at least two discrete representations, a summing element being provided at least between each sequential pair of output delay cells (A'5-A'0 fig. 3);

An output switching network for accumulating output values from the summing elements (fig. 3 switches S'5-S'0); and

A sequence of N taps for coupling the input pipeline to the output pipeline (fig. 3 taps coupling input pipeline to output pipeline at Sel0-Sel5); each tap including a respective multiplier for multiplying a discrete representation from an input tap point by a coefficient (fig. 3 at each tap M0-M5); at least N-1 of the taps including a switching element for directing a discrete representation from an input tap point through the multiplier to a summing element; the switching elements being arranged to enable

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supply of a discrete representation from any tap point to a summing element (tap points to A1-A5 in fig. 3).

7. **As to claim 2**, Van Dalfsen discloses each of the taps are coupled to only one respective summing elements, the switching element being provided in between tap points (coupling of taps to A1, A2, A3, A4, A5 in fig. 3).

8. **As to claim 3**, Van Dalfsen discloses a constant filter width N, output delay cells, and N or N-1 input delay cells (fig. 3 D0-D5 and D'5-D'0).

9. **As to claim 4**, Van Dalfsen discloses the input pipeline includes a switching network for accumulating input values in the input delay cells (fig 3. S0-S5).

10. **As to claim 5**, Van Dalfsen discloses each multiplier is associated with a respective coefficient matrix to enable poly-phase filtering (column 2, lines 43-65).

11. **As to claim 6**, Van Dalfsen discloses a controller operative to control the filter device based on a state machine (fig. 3 controller).

12. **As to claim 7**, Van Dalfsen discloses the state machine determines at least one of the following: a setting of the switching elements (column 2, line 66-column 3, line 6),

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a setting of the output switching network, clocking of the input pipeline and/or output pipeline.

13. **As to claim 8**, Van Dalfsen discloses the state machine determines selection of a coefficient from the coefficient matrix (column 4, lines 16-23).

14. **As to claim 9**, Van Dalfsen discloses the state machine determines a setting of the input switching network (column 2, line 66-column 3, line 6).

15. **As to claim 11**, Van Dalfsen discloses sample rate converting an input signal, where the discrete representations is a sampled input signal, for subsequent rendering by a rendering device (abstract).

16. **As to claim 12**, Van Dalfsen discloses the signal processing apparatus includes the rendering device (column 1, lines 10-31).

Allowable Subject Matter

17. Claim 10 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to MICHAEL YAARY whose telephone number is (571)270-1249. The examiner can normally be reached on Mon-Fri 9 a.m.-5:30 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lewis Bullock can be reached on 571-272-3759. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/M. Y./

Examiner, Art Unit 2193

/Lewis A. Bullock, Jr./

Supervisory Patent Examiner, Art Unit 2193